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Yields of the Field Experiments 1966

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66/S/SA/A/10 Saxmundham - Rotation 1

Rothamsted Research

Rothamsted Research (1967) *66/S/SA/A/10 Saxmundham - Rotation 1* ; Yields Of The Field Experiments 1966, pp 33 - 36 - DOI: <https://doi.org/10.23637/ERADOC-1-158>

66/A/10.1

SAXMUNDEHAM

ROTATION I 1966

(SA)

For history, treatments, rotations etc. see Rothamsted Report for 1964, pp. 228 - 232, and for previous years' results see 'Results' 64/A/10 and 65/A/10.

The rotation is now sugar beet, barley, beans, winter wheat.

Area of each plot: 0.0546. Area harvested: Sugar beet - 0.0107, barley - 0.0234, spring beans - 0.0421, winter wheat - 0.0275.
Area of each sub-plot: 0.0074. Area harvested: 0.0025.

Treatments: New treatments were applied in 1966 as follows:-

| Former plot number | Treatment 1899 - 1965* | Treatment from 1966 |
|--------------------|------------------------|---------------------|
| 1 | D | D |
| 2 | B | B |
| 3 | N | N2P2 |
| 4 | P | N1P1 |
| 5 | K | N1P2K |
| 6 | - | N1P2 |
| 7 | PK | N1P1K |
| 8 | NK | N2P2K |
| 9 | NP | N2P1 |
| 10 | NPK | N2P1K |

* for details see 'Results' 64/A/10.

Symbols (1966) D: 12 tons dung
B: 4 cwt bonemeal
N1, N2: 0.5, 1.0 cwt N to wheat, sugar beet and barley.
C, 0.5 cwt N to beans (all as 'Nitro-Chalk')
P1, P2: 0.4, 0.8 cwt P2O5 as superphosphate
K: 1 cwt K2O as muriate of potash.

A small area at the South end of each plot continues to be treated as in 1899 - 1965, except that (i) N is now applied as 'Nitro-Chalk' (ii) wheat 1966 received treatments as on the main plots. Yields of these sub plots were taken in sugar beet only.

Cultivations, etc.:

Sugar beet: Dung applied and ploughed in: Oct 11, 1965. Ploughed: Oct 12. NPK fertilisers applied: Mar 18, 1966. Bonemeal applied: Mar 22. Seed drilled: Mar 30. Singled: May 23.

66/A/10.2

Sprayed with demeton-s-methyl (Metasystox at 17.3 fluid oz in 36 gals): June 15. Lifted: Oct 10. Variety: Klein E.
Barley: Ploughed (excluding dung plot): Oct 27, 1965. Dung applied: Oct 29. Dung ploughed in: Oct 30. Bonemeal applied: Mar 14, 1966. Fertilisers applied: Mar 15. Seed drilled at 195 lb: Mar 17. Sprayed with Dicamba, MCPA, mecoprop and TBA (Cambilene at 4 pints in 20 gals): May 13. Combine harvested: Aug 17. Variety: Proctor.
Spring beans: Dung applied: Oct 29, 1965. Ploughed in: Oct 30. Ploughed: Nov 3. Bonemeal applied: Mar 14, 1966. Fertilisers applied: Mar 15. Seed drilled at 110 lb: Mar 16. Sprayed with simazine at 1.2 lb in 23 gals: Mar 25. Sprayed with demeton-s-methyl (Metasystox at 17.3 fluid oz in 36 gals): June 15. Combine harvested: Aug 24. Variety: Spring Tick.
Winter wheat: Ploughing begun, stopped by rain: Sept 8, 1965. Dung applied and ploughed in (the remainder was not reploughed): Sept 21. PK fertilisers applied: Sept 27. Bonemeal applied, seed drilled: Oct 5. 'Nitro-Chalk' applied: Mar 26, 1966. Sprayed with Dicamba, MCPA, mecoprop and TBA (Cambilene at 4 pints in 20 gals): Apr 29. Combine harvested: Aug 17. Variety: Cappelle.

66/4/10.3

SUMMARY OF RESULTS

NEW TREATMENTS

| Treatment 1899 - 1965 | Treatment from 1966 | Roots | SUGAR BEET Sugar Total % sugar Tops | Plant number | BARLEY Grain Straw | SPRING BEANS Grain | WINTER WHEAT Grain Straw | | | |
|--------------------------|------------------------|-------|---|-----------------|--------------------------|--------------------------|-----------------------------------|------|------|------|
| D | D | 13.50 | 16.5 | 44.6 | 5.78 | 32.6 | 34.2 | 20.2 | 18.7 | 13.4 |
| B | B | 4.67 | 16.0 | 15.0 | 2.83 | 22.1 | 11.2 | 3.8 | 9.9 | 2.4 |
| N | N2P2 | 13.71 | 17.3 | 47.5 | 6.86 | 29.2 | 29.8 | 16.6 | 27.1 | 18.5 |
| P | N1P1 | 9.60 | 17.2 | 33.0 | 3.86 | 28.1 | 25.4 | 15.9 | 19.8 | 14.2 |
| K | N1P2K | 7.29 | 17.1 | 25.0 | 3.91 | 29.4 | 19.5 | 12.8 | 16.7 | 12.8 |
| - | N1P2 | 9.27 | 17.3 | 32.1 | 3.78 | 30.7 | 28.1 | 13.6 | 17.8 | 6.4 |
| PK | N1P1K | 10.43 | 17.6 | 36.7 | 4.24 | 32.8 | 28.0 | 21.2 | 20.9 | 14.9 |
| NK | N2P2K | 10.10 | 17.4 | 35.2 | 6.44 | 30.8 | 32.4 | 23.6 | 28.3 | 19.9 |
| NP | N2P1 | 11.34 | 17.5 | 39.8 | 7.35 | 34.4 | 31.6 | 19.4 | 28.9 | 17.3 |
| NPK | N2P1K | 10.06 | 17.7 | 35.7 | 6.03 | 35.4 | 29.1 | 15.5 | 32.2 | 24.1 |
| Mean | | 10.00 | 17.2 | 34.5 | 5.11 | 30.5 | 26.9 | 16.2 | 22.0 | 14.4 |
| Mean D.M.%: | | | | | | | 83.5 | 87.7 | 83.0 | 79.1 |

66/A/10.4

OLD TREATMENTS

| Plot no. | Treatment 1899 - 1966 | Roots | Sugar % | SUGAR BEET | | Plant number |
|----------|--------------------------|-------|------------|----------------|------|-----------------|
| | | | | Total sugar | Tops | |
| 1 | D | 11.07 | 16.2 | 35.9 | 5.94 | 29.4 |
| 2 | B | 5.40 | 16.1 | 17.4 | 3.06 | 26.2 |
| 3 | N | 4.41 | 16.7 | 14.7 | 3.24 | 23.8 |
| 4 | P | 4.95 | 16.2 | 16.1 | 2.70 | 29.8 |
| 5 | K | 2.07 | 16.2 | 6.7 | 1.98 | 26.2 |
| 6 | - | 3.51 | 16.4 | 11.5 | 2.52 | 35.9 |
| 7 | PK | 7.29 | 16.9 | 24.6 | 3.78 | 35.9 |
| 8 | NK | 3.69 | 16.7 | 12.3 | 3.42 | 31.1 |
| 9 | NP | 12.69 | 16.9 | 43.0 | 5.22 | 30.7 |
| 10 | NPK | 11.16 | 17.3 | 38.6 | 5.58 | 34.3 |
| Mean | | 6.63 | 16.6 | 22.1 | 3.75 | 30.3 |